

Inventors: Tononi et al.  
Serial No.: 09/733,607  
Filed: December 8, 2000  
Page 2

### **Listing of Claims**

1. (withdrawn) An isolated vigilance nucleic acid molecule, comprising a nucleotide sequence selected from the group consisting of SEQ ID NOS:1-6 and 8-27, or modification thereof.
2. (withdrawn) The isolated nucleic acid molecule of claim 1, attached to a solid support.
3. (withdrawn) An isolated oligonucleotide, comprising at least 15 contiguous nucleotides of the nucleotide sequence of SEQ ID NOS:1-6 and 8-27, or the antisense strand thereof.
4. (withdrawn) The isolated oligonucleotide of claim 3, attached to a solid support.
5. (withdrawn) A kit, comprising two or more isolated oligonucleotides according to claim 3.
6. (withdrawn) The kit of claim 5, comprising a PCR primer pair.
7. (withdrawn) A kit, comprising two or more isolated vigilance nucleic acid molecules, wherein at least one vigilance nucleic acid molecule comprises a nucleotide sequence selected from the group consisting of SEQ ID NOS:1-6 and 8-27 or modification thereof.

Inventors: Tononi et al.  
Serial No.: 09/733,607  
Filed: December 8, 2000  
Page 3

8. (withdrawn) The kit of claim 7, wherein said isolated vigilance nucleic acid molecules are attached to a solid support.

9. (withdrawn) The kit of claim 7, further comprising one or more isolated nucleic acid molecules selected from the group consisting of *Fas*, *BiP*, *Cyp4e2*, *AANAT1 (Dat)*, *Ddc*, *Cytochrome P450*, AA117313, *aryl sulfotransferase IV*, human breast tumor autoantigen homolog, KIAA313 homolog, *E25*, *NGFI-A*, *NGFI-B*, *rlf*, *Arc*, *JunB*, *IER5*, *Cytochrome oxidase C subunit 1*, *Cytochrome oxidase C subunit IV*, *NADH dehydrogenase subunit 2*, *12S rRNA F1-ATPase subunit alpha*, Ng/RC3, bone morphogenetic protein 2, GRP78, BDNF, IL-1 $\gamma$ , dendrin, Ca<sup>++</sup>/calmodulin-dependent protein kinase II  $\gamma$ -subunit, orexin, orexin receptor, and PRNP.

10. (withdrawn) A method of diagnosing a vigilance disorder in an individual, comprising:

determining a vigilance gene profile of the individual, and

comparing said profile to a control profile indicative of the vigilance disorder, wherein at least one vigilance gene profiled is selected from the group consisting of *Fas*, *BiP*, *Cyp4e2*, *AANAT1 (Dat)*, *Ddc*, *Cytochrome P450*, AA117313, *aryl sulfotransferase IV*, human breast tumor autoantigen homolog, KIAA313 homolog, *E25*, and a gene comprising a nucleotide sequence of any of SEQ ID NOS:2-6, 8-14 and 16-27 or modification thereof,

wherein correspondence between said profile of said individual and said control profile indicates that said individual has said vigilance disorder.

Inventors: Tononi et al.  
Serial No.: 09/733,607  
Filed: December 8, 2000  
Page 4

11. (withdrawn) A method of determining vigilance level in an individual, comprising:

determining a vigilance gene profile of the individual, and

comparing said profile to a control profile indicative of a predetermined vigilance level, wherein at least one vigilance gene profiled is selected from the group consisting of *Fas*, *BiP*, *Cyp4e2*, *AANAT1 (Dat)*, *Ddc*, *Cytochrome P450*, AA117313, *aryl sulfotransferase IV*, human breast tumor autoantigen homolog, KIAA313 homolog, *E25*, and a gene comprising a nucleotide sequence of any of SEQ ID NOS:2-6, 8-14 and 16-27 or modification thereof,

wherein correspondence between said profile of said individual and said control profile indicates that said individual exhibits said vigilance level.

12. (original) A method of determining the efficacy of a compound in ameliorating a vigilance disorder, comprising:

administering the compound to an individual having a vigilance disorder, and

determining an effect of the compound on the vigilance gene profile of the individual, wherein at least one vigilance gene profiled is selected from the group consisting of *Fas*, *BiP*, *Cyp4e2*, *AANAT1 (Dat)*, *Ddc*, *Cytochrome P450*, AA117313, *aryl sulfotransferase IV*, human breast tumor autoantigen homolog, KIAA313 homolog, *E25*, and a gene comprising a nucleotide sequence of any of SEQ ID NOS:2-6, 8-14 and 16-27 or modification thereof,

wherein modulation of the vigilance gene profile of the individual to correspond to a normal vigilance profile indicates that the compound is effective in ameliorating the vigilance disorder.

Inventors: Tononi et al.  
Serial No.: 09/733,607  
Filed: December 8, 2000  
Page 5

13. (original) A method of determining the efficacy of a compound in modulating vigilance, comprising:

administering the compound to an individual, and

determining an effect of the compound on the vigilance gene profile of the individual, wherein at least one vigilance gene profiled is selected from the group consisting of *Fas*, *BiP*, *Cyp4e2*, *AANAT1 (Dat)*, *Ddc*, *Cytochrome P450*, AA117313, *aryl sulfotransferase IV*, human breast tumor autoantigen homolog, KIAA313 homolog, *E25*, and a gene comprising a nucleotide sequence of any of SEQ ID NOS:2-6, 8-14 and 16-27 or modification thereof,

wherein modulation of the vigilance gene profile indicates that the compound modulates vigilance.

14. (withdrawn) A method of ameliorating a vigilance disorder in an individual, comprising:

administering to an individual having a vigilance disorder an agent that modulates the vigilance gene profile of the individual to correspond to a normal vigilance gene profile,

wherein at least one vigilance gene profiled is selected from the group consisting of *Fas*, *BiP*, *Cyp4e2*, *AANAT1 (Dat)*, *Ddc*, *Cytochrome P450*, AA117313, *aryl sulfotransferase IV*, human breast tumor autoantigen homolog, KIAA313 homolog, *E25*, and a gene comprising a nucleotide sequence of any of SEQ ID NOS:2-6, 8-14 and 16-27 or modification thereof.

Inventors: Tononi et al.  
Serial No.: 09/733,607  
Filed: December 8, 2000  
Page 6

15. (withdrawn) A method of modulating vigilance level in an individual, comprising:

administering to an individual an agent that modulates the vigilance gene profile of the individual to correspond to a control vigilance gene profile,

wherein at least one vigilance gene profiled is selected from the group consisting of *Fas*, *BiP*, *Cyp4e2*, *AANAT1* (*Dat*), *Ddc*, *Cytochrome P450*, AA117313, *aryl sulfotransferase IV*, human breast tumor autoantigen homolog, KIAA313 homolog, *E25*, and a gene comprising a nucleotide sequence of any of SEQ ID NOS:2-6, 8-14 and 16-27 or modification thereof.